

# Agenda

All events, unless specified otherwise, are scheduled at:

**The Grumman Auditorium  
The William and Ida Friday Center for Continuing Education  
University of North Carolina at Chapel Hill  
Chapel Hill, North Carolina**

## **December 5, 2004 (Sunday)**

8:00 – 9:00 p.m.      **Welcoming reception** (Carolina Inn)

## **December 6, 2004 (Monday):**

7:00 -                      Registration begins at the Friday Center

7:30 – 8:00 a.m.      Continental Breakfast (provided with registration)

8:00 – 8:25 a.m.      **Welcoming Remarks:**  
William Kaufmann, PI UNC Program in Toxicogenomics  
Kenneth Olden, Director, NIEHS

8:30 – 9:15 a.m.      **Keynote address: *Toxicogenomics and Mechanisms of Toxicity***  
Roger Ulrich  
Senior Scientific Director  
Rosetta Inpharmatics

### **9:15 – 10:45 a.m.      Presentations by the University of North Carolina-Chapel Hill**

9:15 – 9:25 a.m.      Introduction: William Kaufmann, PI UNC Program in  
Toxicogenomics

9:25 – 9:45 a.m.      Charles Perou  
*Gene Expression Signatures of Toxicant-Exposed  
Human Mammary Epithelial Cells*

9:50 – 10:10 a.m.      William Kaufmann  
*Profiles of Genetic Susceptibility to Oxidative Stress*

10:15 – 10:35 a.m.      David Threadgill  
*Mouse Strain-Specific Molecular Profiles in Response to  
Toxicants*

10:45 – 11:00 a.m.      Coffee Break

### **11:00 – 12:00 p.m.      Presentations by the NIEHS/NCT**

11:00 – 11:10 a.m.      Introduction: Richard Paules, PI NIEHS Microarray Group, TRC  
Toxicogenomics Program

- 11:10 – 11:30 a.m. Richard Paules  
*The Use of Gene Expression Analyses to Investigate ATM Function and Signaling Responses to DNA Damage*
- 11:35 – 11:55 a.m. Raymond Tennant  
*Analysis of Tumor-Specific Differentially Expressed Genes in Skin Papilloma Development*
- 12:00 – 1:30 p.m. Lunch (provided with registration)
- 1:30 – 2:15 p.m. **Keynote address: *Disease Mechanisms and Susceptibility***  
David Botstein  
Director, Lewis-Sigler Institute for Integrative Genomics  
Princeton University
- 2:15 – 3:15 p.m. **Oral Presentations from outside the TRC**  
(4 presentations selected from submitted abstracts)
- 3:15 – 3:30 p.m. Coffee Break
- 3:30 – 5:30 p.m. **Presentations by Fred Hutchinson Cancer Research Center and the University of Washington**
- 3:30 – 3:40 p.m. Introduction: Helmut Zarbl, PI FHCRC/UW Program in Toxicogenomics
- 3:40 – 4:00 p.m. Elaine Faustman  
*Toxicogenomic Pathway Analysis of Sensitive and Resistant Mammalian Models for Neurodevelopmental Toxicology*
- 4:05 – 4:25 p.m. Clement Furlong  
*Effect of the Human Paraoxonase (PON1) Polymorphisms on the Consequences of Developmental Exposure to the Organophosphorus Insecticide Chlorpyrifos Oxon*
- 4:30 – 4:55 p.m. Curtis Omiecinski (Pennsylvania State University)  
*Species and Zone-Specific Hepatic Gene Expression*
- 5:00 – 5:20 p.m. Helmut Zarbl  
*Response of Mammary Cells from Sensitive and Resistant Rat Strains to Carcinogens*
- 5:30 – 7:30 p.m. **Poster Session and Reception**
- 6:30 – 7:30 p.m. **Break-Away Session (Sunflower Room, Friday Center):  
*Bioinformatics and Computational Biology Tools***
- 6:30 – 6:50 p.m. Michael Waters (NIEHS)  
*Chemical Effects in Biological Systems (CEBS) Knowledge Base*
- 6:50 – 7:10 p.m. Russell Wolfinger (SAS Institute)  
*SAS Scientific Discovery Solutions*

- 7:10 – 7:30 p.m. Robert Williams (University of Tennessee – Memphis)  
*WebQTL: An Open Internet Resource to Explore Complex Interactions of Toxins and Drugs with Normal Genetic Variation*
- 8:00 – 9:30 p.m. Toxicogenomics Research Consortium Steering Committee meeting  
(closed session at the Carolina Inn)

**December 7, 2004 (Tuesday):**

- 7:30 – 8:00 a.m. Continental Breakfast (provided with registration)
- 8:00 – 8:30 a.m. **Special Presentation:**  
Rebecca Fry (Massachusetts Institute of Technology)  
*Standardization of Microarray Analysis Across Platforms and Laboratories – Efforts by the Toxicogenomics Research Consortium*
- 8:30 – 10:00 a.m. **Presentations by Oregon Health & Science University**
- 8:30 – 8:40 a.m. Introduction: Peter Spencer, PI OHSU Program in Toxicogenomics
- 8:40 – 9:00 a.m. Charles Roberts  
*Growth factor action in neurodegenerative disease*
- 9:05 – 9:25 a.m. Sri Nagalla  
*Role of Gene Expression in Brain Injury*
- 9:30 – 9:50 a.m. Jeffrey Miller (Boston Biomedical Research Institute)  
*Evaluating the significance of apoptosis in neuromuscular pathology*
- 10:00 – 10:15 a.m. Coffee Break
- 10:15 – 11:15 a.m. **Presentations by Duke University**
- 10:15 – 10:25 a.m. Introduction: David Schwartz, PI Duke Program in Toxicogenomics
- 10:25 – 10:45 a.m. David Schwartz  
*The Genetics of Innate Immunity*
- 10:50 – 11:10 a.m. Elwood Linney  
*The Genetics of Neural Tube Development*
- 11:15 – 12:15 p.m. **Presentations by Commercial Vendors**
- 11:15 – 11:30 a.m. Agilent Technologies
- 11:30 – 11:45 a.m. Affymetrix
- 11:45 – 12:00 p.m. Applied Biosystems
- 12:00 – 12:15 p.m. GE Healthcare

- 12:15 – 1:45 p.m. Lunch (provided with registration)
- 1:45 – 3:15 p.m. **Presentations by Massachusetts Institute of Technology**
- 1:45 – 1:55 p.m. Introduction: Rebecca Fry, MIT Program in Toxicogenomics
- 1:55 – 2:15 p.m. John Essigmann  
*Differential Expression of Genes Following Exposure of Mice to Aflatoxin B<sub>1</sub>*
- 2:20 – 2:40 p.m. Lisiane Meira  
*Transcriptional Responses of Mice to Alkylating Agents*
- 2:45 – 3:05 p.m. Linda Griffith  
*Liver MicroBioreactors: A New Tool for Toxicology*
- 3:15 – 3:30 p.m. Coffee Break
- 3:30 – 6:10 p.m. **Presentations of “STAR” Collaborative Research Projects**
- 3:30 – 3:40 p.m. Introduction: Brenda K. Weis, NIEHS
- 3:40 – 4:00 p.m. Ivan Rusyn (UNC – NIEHS - MIT)  
*Genomic profiling in nuclear receptor-mediated toxicity*
- 4:05 – 4:25 p.m. Helmut Zarbl (FHCRC – UW - Duke)  
*Mechanisms of selenium-induced chemoprevention*
- 4:30 – 4:50 p.m. Terry Kavanagh (UW – Duke – NIEHS - UNC)  
*Analytic cytology enhancements to toxicogenomic analyses*
- 4:55 – 5:15 p.m. Jon Freedman (Duke – MIT - UW)  
*Comparative genomic responses to environmental toxicants*
- 5:20 – 5:40 p.m. Peter Spencer (OHSU – MIT – FHCRC)  
*DNA alkylation in neurodegenerative disease and cancer*
- 5:45 – 6:05 p.m. Peter Spencer (OHSU – FHCRC - UW)  
*Genetic modulation in hydrocarbon solvent neurotoxicity*
- 7:30 – 9:30 p.m. **Banquet** (open to attendees with a reservation)  
Spice Street, 201 S. Estes Drive, Chapel Hill, NC

**December 8, 2004 (Wednesday):**

- 7:30 – 8:00 a.m. Continental Breakfast
- 8:00 – 10:00 a.m. **Special Session:**  
***Emerging Issues and Technology Development in Toxicogenomics***  
Chair: Ivan Rusyn, UNC

- 8:00 – 8:25 a.m. William Greenlee (CIIT, RTP, NC)  
*Application of Functional Genomics to Toxicology Research*
- 8:30 – 8:55 a.m. Stephen Naylor (MIT and BU, Boston MA)  
*Systems Biology*
- 9:00 – 9:25 a.m. David Walt (Tufts University, Boston, MA)  
*Nanotechnology*
- 9:30 – 9:55 a.m. Kenneth Paigen (Jackson Labs, Bar Harbor, ME)  
*Inbred Mice as a Resource in Toxicology*
- 10:00 – 10:30 a.m. Coffee Break
- 10:30 – 11:45 p.m. **Panel Discussion**  
***Emerging Issues and Technology Development in Toxicogenomics***  
Chair: William A. Suk, NIEHS
- 11:45 – 12:00 p.m. Concluding Remarks: William Suk, NIEHS
- 12:00 – 1:30 p.m. Lunch (@ the Friday Center, provided with registration)
- 2:00 p.m. - Participants depart